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MEDICAL WASTE MANAGEMENT POLICY AND METHODS. A CROSS-SECTIONAL STUDY IN BENADIR HOSPITALS IN MOGADISHU, SOMALIA.

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Abstract

Aim

To identify the medical waste management policy and methods in Benadir Hospitals in Mogadishu, Somalia.

Methods

A cross-sectional study with an observation method was used. This was suitable for this research since data for both (independent and dependent) variables were collected using the questionnaire and some key informant guides.

Results

It was interesting to note that most of the respondents (59/70; 84.3%) had separate containers (bins) for different types of waste and 54 (77.1%) were segregating medical wastes (Table 3). The wastes were separated into infectious (41.4%), hazardous waste (41.4%), non-hazardous recyclable (7.1%), and radioactive (7.1%) wastes. These wastes were stored in labeled general waste bins (36.1%), recycling bins (21.6%), sharps containers (15%), infectious waste cartons (14.4%), and hazardous chemical waste containers (12.4%).

Conclusion

Overall, 67.1% of the respondents were aware that the hospital had HCWM policies and procedures Approximately 22.9% of the respondents who admitted their lack of practice of source segregation of medical wastes in this study suggests that there is a lack of unison in the practice of waste segregation among the health care workers in Benadir Hospital.

Recommendation

It should be noted that the availability of clear national and healthcare facility policies that are up-to-date, comprehensive, and known to every health worker is vital for effective HCWM. There is a need to create awareness among healthcare workers on the proper management of the medical waste.

Keywords: *Medical Waste, Management Policy, Benadir Hospitals, Mogadishu, Somalia.*
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Background

A study carried out by Mathur, Patan, and Shobhawat (2022) focused on the need for a biomedical waste management system in hospitals-An emerging issue review. A total of about 2.65 tonnes of medical waste are produced each day in Ulaanbaatar (0.78 tons of medical waste and 1.87 tons of general waste)(Shinee et al., 2008). The medical waste generation rate per kg/patient-day in the inpatient services of public healthcare facilities was 1.4–3.0 times higher than in the outpatient services ($P < 0.01$). Accordoing to Shinee et al., 2008 waste generation rate in the healthcare facilities of Ulaanbaatar was lower than in some other countries; however, the percentage of medical wastes in the total waste stream was comparatively high, ranging from 12.5% to 69.3%, which indicated poor waste handling practices.

Several institutions and policies in Somalia deal with medical waste management. The Ministry of Public Health and sanitation was established to guide health professionals and other stakeholders in the provision of safe injections and proper management of waste to protect health providers and the community from injuries (Ministry of Health, 2017). The Waste Management Regulations 2016, anchored under the Environmental Management and Co-ordination Act 2019, imposes a duty of care on the occupier of premises where medical waste management is handled to take measures to ensure that such waste is handled without adverse effects on human health and to the environment and natural resources (GoS, 2016). The implementation of the Occupational Safety and Health Act, 2017 is a concern of the Ministry of Labor which provides for a healthy and safe workplace for all workers (GoS, 2017). The Public Health Act Cap 242, part IX deals with sanitation and housing, which imposes responsibility on local authorities (now County Governments) to take measures in the maintenance of a clean and sanitary condition in their areas.

One of the strategies created is the National Policy on Injection Safety and Medical Waste Disposal (2017) which has a statement of purpose of guaranteeing the

wellbeing of laborers, patients, and their network and keeping up a sheltered situation through the advancement of safe infusion practices and appropriate management of related medical wastes management. This was the principal archive of the Ministry of Public Health and Sanitation that is unequivocal on the need to address medical waste management issues. The arrangement illuminates the need to advocate for help and usage of legitimate administration of medical waste management among others. The arrangement has a portion of the core values which incorporate: the establishment of organizational structures at all levels for the proper implementation of injection safety and related medical waste management policies, the policy also addresses the need for environmental protection through appropriate waste disposal methods, minimization of risks to patients, medical workers, communities and the environment and advocating for the strengthening of the necessary human resource capacity through training and sensitization for safe waste handling and disposal (Ministry of Health [MOH], 2017).

The need for appropriate financial mobilization and allocation of the key components for policy implementation is one of the key policy strategies indicated in this policy. For example, the provision of equipment for waste management and sustained supplies through a strengthened logistics system addresses the need for commensurate investment in waste handling requirements. Advocacy for best waste management practices through behavior change communication is a key element according to the recommendations of the unique strategy. The National Medical Waste Management Plan 2018-2022 (MOH, 2018) for Somalia underscores the need for serious involvement of health managers at all levels of the healthcare service delivery system to invoke the desired high-level commitment. “The implementation of this plan over the five years (2018-2022) was envisaged to result in the improvement of health care waste management and the general cleanliness within the health care facilities and hence reduce hazards and risks associated with poor medical wastes management in the community” (MoH, 2017).

Moreira and Günther (2023) conducted a study on the assessment of medical waste management at a primary health-care center in São Paulo, Brazil. The total waste generation increased by 9.8%, but it was reduced to a volume of non-recyclable materials (11%) and increase the volume of recyclable materials (4%). It was also possible to segregate organic waste (7%), which was forwarded for the production of compost. The rate of infectious waste generation in critical areas decreased from 0.021 to 0.018 kg/procedure(Moreira & Günther, 2013). Many improvements have been observed, and now the PHC complies with most of the legal requirements, offers periodic training and better biosafety conditions to workers, has reduced the volume of waste sent to sanitary landfills, and has introduced indicators for monitoring its performance(Shinee et al., 2008). Thus the study aimed to identify the medical waste management policy and methods in Benadir Hospitals in Mogadishu, Somalia.

METHODOLOGY

Research Design

A cross-sectional study with an observation method was used. This was suitable for this research since data for both (independent and dependent) variables were collected using the questionnaire and some key informant guides (Orodho, 2013). The quantitative approach contemplated the numerical information from participants.

Target Population

Mogadishu has an estimated population of 1,098,584 people living in 264,500 households and covers an area of 6,208 km^2. Due to limited resources, this study only focuses on Mogadishu's Level 5 hospital (the only one in the County), one Level 4 hospital (Hodan Hospital), one health Centre (level 3), and one dispensary (Level 2). This included health staff, waste handlers, waste equipment operators, and health facility

Sample Size

The study sample size was calculated based on the Yamane (1967) formula that assumes a 95% confidence level.

$$n = \frac{N}{1+N(e^2)}$$

Where N is the total number of patients is the sample size to be determined and e is the level of precision. The formula is applied to the total number of adult patients attending BRH at a precision level of 0.05.

$$n = \frac{100}{1+100(0.05)^2}$$

$$n = 70$$

The study sampled 70 respondents, representing 19% of the accessible population which is recommended with the help of none other than social researchers who regularly recommend that 10-30 % of the population accessed was enough, and for statistical data analysis at least 30 of these cases are required (Mugenda & Mugenda, 2003). Therefore, the current sample size was a good representation of the entire population.

The study sample was also drawn from the strata which comprised the various categories of health staff in the four selected facilities. Samples were drawn from the strata which comprised Doctors, Nurses, Medical Lab Officers, Clinical Officers, Public Health Officers, Pharmacists, Waste Cleaners, and other staff in Mogadishu. On the other hand, the power of selective sampling lies in the selection of cases with rich information (key informants) for an in-depth study of factors that will be related to the key issues under study (Kombo & Tromp, 2016). Therefore, only Mogadishu Level 5 hospital (the only one in the area), one level-4 hospital, one health center (Level 3), and a single dispensary (Level 2) were purposefully selected in this study excluding other health facilities in the region that the researcher notes to have viable information necessary to assist in this study.

Sampling Techniques

A stratified sampling technique was used where medical workers from four selected healthcare facilities within Mogadishu participated in the survey. This technique was considered appropriate for the study as the stratified random sampling technique helps in achieving the intended representation for various subgroups in the given population, with the generalization that only contains minimal bias (Sekaran, 2020).

The study also adopted simple stratified random sampling. Stratification was done based on the cadre of the respondents, and then within each cadre, the study adopted simple random sampling. The names of all the respondents were written and folded into a pot. Then the researcher randomly selected those that would participate in the research.

Inclusion criteria

The study included all medical workers working in the health facilities within Mogadishu that deal with medical waste management systems at any stage.

Data Collection methods

Primary data were gathered using two research instruments: a semi-structured questionnaire having both open-ended and closed questions, and an open-ended/structured key informant schedule/interview guide for the four selected healthcare facilities to measure and compare the similarity of facilities. Semi-structured type of questionnaire was appropriate for this study as per the recommendation of Gay (2022) who insists, that open-ended questions offer the respondents the freedom to relay their views or perspectives and also to make propositions. On the other hand, closed-ended questions initiate specific responses and facilitate easy analysis of the data. The questionnaire exploited a five-point Likert scale in particular Strongly Agree (SA), Agree (A), Disagree (D), Neutral (N), and Strongly Disagree (SD). This allowed the researcher to draw conclusions based on comparisons made from the responses.

Oral interviews were conducted with medical superintendents and public health officers in charge. The health administrators in the four selected health facilities in Mogadishu were also interviewed since they deal directly with health facility matters and oversee the records. Interviews were used to evoke information on factors affecting medical waste management systems in Mogadishu. Secondary data containing appropriate information were captured from available documentation in related research reports, journals, books, internet from hospital websites, conference reports, strategic plans, policy and procedure manuals, government publications, employee performance reports, and other

Internet materials available.

Data Collection Procedure

After preparing the questionnaires, firstly the researcher conducted a pre-test study at Mogadishu Health Centers. Then the researcher contacted the respective health facilities management with an introductory letter from the university and Clearance from the Mogadishu Department for Health Services to collect data using the questionnaires. The researcher explained to the top management staff in the respective health facilities the purpose and intention of the study. The researcher then delivered the questionnaires to the respondents. The respondents filled out the questionnaires and those who were not able to fill them on time were granted a maximum of one week then the questionnaires were collected. The researcher made efforts by contacting the top management of the respective health facilities to help him collect the questionnaires therefore saving time and resources.

Pilot test

A pre-test study was undertaken on 15 medical workers in Mogadishu Health Center and 15 medical workers in Hodan Health Center which translates to 20% of the actual sample size. This was deemed to be appropriate according to recommendations by Kothari (2014) who observed a successful pre-test study utilizing 10% to 30% of the ideal sample size. After pre-testing, a questionnaire was redrafted to integrate the feedback that was dispensed by respondents.

Reliability of the Research Instruments

According to Kothari (2014), the reliability of a measuring instrument depends on the consistency of the results it generates. A reliable measuring tool does contribute to validity, but a reliable instrument need not be a valid instrument. The reliability of the questionnaire was analyzed through Cronbach's alpha coefficient which ranges between 0.00 and 1.0. According to Tavakol and Dennick (2021), a value of 0.70 and beyond is admissible for exploratory research. The coefficient is calculated from Cronbach's alpha is:

$$\alpha = \frac{kr}{(1+k-1)\,r}$$

Where k=the number of indicators or the number of items

r = the mean inter-indicator correlation

The value 1 gets for α = usually specifies the percentage of reliable variance.

Table 1: Reliability Analysis

Variables	Reliability Cronbach's Alpha	Comments
MWM Process	0.775	Accepted
Health Manager's Role	0.703	Accepted
Human Resource Factors	0.771	Accepted
MWM Policy Implementation	0.713	Accepted

Validity of the Research Instrument

This is the extent to which those distinctions found with a measuring tool mirror true variations among those being tested (Kothari, 2014). According to Gay (2022), validity is established by expert judgment technique. In this case, the questionnaire was created in close discussion with the university supervisors and research experts.

Data Analysis and Presentation

Data were checked for completeness and captured in Microsoft Excel 2019 (Microsoft Corporation, USA). For a wider projection in the output of the data applied in the study, simple descriptive statistics such as the value in percentages have an appreciable advantage over other complex statistics values (Bell, 2020). The study therefore utilized descriptive statistics (percentages, frequencies, mean, and standard deviation) to analyze quantitative data, while inferential statistics (correlation, regression, and normality test) were done to give insight into the variable relationship between independent variables and a dependent variable using SPSS Version 25. The choice to use regression and correlation analysis in the Likert scale was informed by the argument of Sullivan and Artino (2023) that provided evidence on the legitimacy of the Likert scale in medical research. According to Sullivan and Artino (2023), descriptive statistics and inferential tests can be used to analyze Likert scale responses. However, to describe the data, means are often of limited value unless the data follow a classic normal distribution and a frequency distribution of responses will likely be more helpful. Furthermore, because the numbers derived from Likert scales represent ordinal responses, the presentation of a mean to the 100^{th} decimal place is usually not helpful or enlightening to readers. A bivariate logistic regression model was used to estimate odds ratios (ORs) of having inadequate knowledge and poor practices regarding HCWM. All tests were two-sided, and statistical significance was considered at $P<0.05$.

Quantitative raw data was altered to eliminate inconsistencies, and were summarized and coded for simple classification.

Ethical Considerations

Before the process of data collection, all the necessary authorization letters were obtained. The researcher first obtained authorization from Kampala University, Uganda which was used to obtain a research permit from Mogadishu. Permission was sought from the management of research research-generating firms to enable easy access to the Mogadishu Offices for data collection. Informal consent was obtained from the individuals before the questionnaires were administered. Throughout the data collection process, the researcher ensured that privacy, confidentiality, and anonymity aspects of ethical research were adhered to. For instance, no respondent was required to write their name on the questionnaire and the researcher assured the respondents that the information they provided would not be shared with third parties for another purpose besides academics. Only respondents who provided informal consent were enrolled in the survey.

Results

Socio-demographic characteristics of the respondents

In this study, 57.1% of 80 respondents were males while the rest were females (42.9%) (Table 2). These results are different from those recorded in a previous study assessing the infection prevention practices and associated factors among healthcare workers in public health facilities of Mogadishu, Somalia (Said et al., 2023) where men represented only 42.1% of the study participants.

The participants in this study were working as health staff (70.0%), health facility administrators (15.7%), waste handlers (8.6%) and waste equipment operators (5.7%). They have been in service for below 5 years (71.4%) and 5-15 years (22.9%). In Ho Teaching Hospital in Ghana.

Table 2: Socio-demographic profile of the respondents

Characteristics	Category	Frequency	Proportion (%)
Gender	Female	30	42.9
	Male	40	57.1
Age	Below 30 years	64	91.4
	31-45 years	06	8.6
Educational level	Certificate	02	2.8
	Diploma	03	4.3
	Bachelor's Degree	43	61.4
	Master's Degree	20	28.6
	Not declared	02	2.8
Current position	Health Facility Administrator	11	15.7
	Health Staff	49	70.0
	Waste Handler	06	8.6
	Waste Equipment Operator	04	5.7
Length of service			
	Below 5 years	50	71.4
	5-15 years	16	22.9
	16 years and above	03	4.3
	Not declared	01	1.4

Medical Waste Management Policies, methods, of health workers in Benadir Hospital

Overall, 67.1% of the respondents were aware that the hospital had HCWM policies and procedures (Table 3). This observation is similar to a previous observation in some public healthcare facilities in Gauteng Province, South Africa (Ramodipa et al., 2023). It was interesting to note that most of the respondents (59/70; 84.3%) had separate containers (bins) for different types of waste and 54 (77.1%) were segregating medical wastes (Table 3). The wastes were separated into infectious (41.4%), hazardous waste (41.4%), non-hazardous recyclable (7.1%), and radioactive (7.1%) wastes. These wastes were stored in labeled general waste bins (36.1%), recycling bins (21.6%), sharps containers (15%), infectious waste cartons (14.4%), and hazardous chemical waste containers (12.4%).

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OriginalArticle

Table 3: Medical waste management policies, methods, knowledge and attitudes of health workers in Benadir Hospital

Variable	Response	Frequency	Percentage
HCWM policies and procedures adopted			
	Yes	47	67.1
	No	21	30.0
	No response	02	2.9
Separate containers (bins) for different types of wastes			
	Yes	59	84.3
	No	11	15.7
Segregation of medical wastes			
	Yes	54	77.1
	No	16	22.9
Waste categories segregated			
	Non-hazardous recyclable	05	7.1
	Hazardous waste	29	41.4
	Infectious waste	29	41.4
	Radioactive waste	05	7.1
	No response	02	2.9
Types of containers used			
	General waste bin	35	36.1
	Infectious waste cartons	14	14.4
	Recycling bins	21	21.6
	Hazardous chemical waste containers	12	12.4
	Sharps containers	15	15.5
Handling of medical waste indicated			
	Yes	52	74.3
	No	18	25.7
Medical wastes treated before disposal			
	Yes	37	52.9
	No	33	47.1
Waste treatment technologies			
	Incineration	15	20.0
	Microwave disinfection	07	9.3
	Chemical disinfection	25	33.3
	Autoclaving	28	37.4
Final waste disposal			
	Landfill	20	26.7
	Composting	13	17.3
	Recycling	30	40.0
	Pyrolysis	12	16.0

Independent predictors for healthcare waste management among health workers in Benadir Hospital

Regarding independent predictors, male workers (Odds Ratio, OR = 0.8845, 90% CI: 0.3043, 2.5715) with Bachelor's degree (OR = 0.3477, 90% CI: 0.1081, 1.1182) and working as health staff (OR = 1.3637, 90% CI: 0.4493, 4.1392) were unlikely to practice good HCWM (Table 4). On the other hand, employees below 30 years of age were more likely to practice good medical waste management (OR = 1.7116, 90% CI: 0.3315, 8.8382). This was, however, not significant (P = 0.590). Similarly, workers who had been in service for less than 5 years were six times more likely to practice good HCWM (OR = 6.7762, 90% CI: 2.2502, 20.4050) as opposed to those who had been in service for 5 years and above.

Table 4: Independent predictors of Health care waste management among health workers in Benadir Hospital, Somalia

Variables	Frequency	Proportion (%)	Coefficient	*Odds ratio*	90% CI	*P* value
Gender						
Female	30	42.9				
Male	40	57.1	-0.059	0.8845	0.3043-2.5715	0.920
Age						
31-45 years	06	8.6				
Below 30 years	64	91.4	0.537	1.7116	0.3315-8.8382	0.590
Educational level						
Certificate	02	2.8				
Diploma	03	4.3				
Bachelor's Degree	43	61.4	-1.057	0.3477	0.1081-1.1182	0.137
Master's Degree	20	28.6				
Not declared	02	2.8				
Current position						
Health facility administrator	11	15.7				
Health Staff	49	70.0	0.310	1.3637	0.4493-4.1392	0.646
Waste Handler	06	8.6				
Waste equipment operator	04	5.7				
Length of service						
Below 5 years	50	71.4	1.913	6.7762	2.2502, 20.4050	0.004*
5-15 years	16	22.9				
16 years and above	03	4.3				
Not declared	01	1.4				

Note: CI = Confidence interval, *statistically significant at p < 0.05.

DISCUSSIONS

Social-demographic characteristics.

Another study investigating the medical waste management practices across hospitals in Lagos, Nigeria reported that majority (53.3%) of their study respondents were females (Awodele et al., 2016). Letho et al. (2021) and Onoh et al. (2019) also indicated the dominance of female staff (54.1% and 75.6%) involved in medical waste management in Jigme Dorji Wangchuck National Referral Hospital (Bhutan) and Lassa Fever Treatment Facility in Southeast Nigeria, respectively. Participation was also indicated to be skewed towards female health workers with only 26.5% males in a study of medical waste management among health workers in Kampala, Uganda (Wafula et al., 2019). Our results are similar to that of Omoleke et al. (2021) where 81.8% males participated in a study of the medical wastes management at some primary healthcare centres in Kebbi State, Nigeria. In Ho Teaching Hospital in Ghana, Afesi-Dei et al. (2023) also found that males made up of 59% of the respondents as compared to 41% females.

Results of this study also indicated that majority of the participants were below 30 years of age (91.4%) (Table 4.1). Participants in a similar study in Kebbi State, Nigeria were reported majorly in the age bracket of 25–34 years (33.3%) and 35–44 years (37.6%) (Omoleke et al., 2021). Most of the study respondents were holding a bachelor's degree (61.4%). These results are similar to those of Said et al. (2023) where bachelor's degree holders constituted 81.1% of the total respondents. In contrast to a study in Nigeria, most of the health workers (97.3%) involved in medical waste management in Kebbi State had only ordinary national diploma (Omoleke et al., 2021). These contrasting results attest to the fact that most employees in African health care facilities are either diploma holders or graduates but more training is required especially for individuals with certificates and diplomas (Okoroafor et al., 2022).

Afesi-Dei et al. (2023) reported that 20% of the respondents were administrators and heads of departmental units in the hospital. Fifty percent (50%) were other health workers (medical doctors, nurses and mid-wives) and the remaining 30% were the medical waste collectors. Pertaining to length of service, similar results were found in a Nigerian study (Omoleke et al., 2021) where most health workers involved in medical waste management had worked for 1–10 years (43.0%) followed by 11–20 years (36.9%). Such years of service

may translate into accumulated experience in wastes management.

Medical waste management policies, methods, of health workers in Benadir Hospital.

In a similar study in Kampala (Uganda), most (188/200; 94.0%) of the health workers had a waste bin around their working area (Wafula et al., 2019) which is in line with the observations in this study. Practice of waste segregation at source by the respondents was also reported among health workers in Ho Teaching Hospital, Ghana (Afesi-Dei et al., 2023), Tamale Central Hospital, Ghana (Abanyie et al., 2021), Dakar, Senegal (Dieng et al., 2020) and Addis Ababa, Ethiopia (Debere et al., 2013). Approximately 22.9% of the respondents who admitted their lack of practice of source segregation of medical wastes in this study suggests that there is lack of unison in the practice of waste segregation among the health care workers in Benadir Hospital. To enhance segregation of wastes at the source and prevent careless handling of injurious wastes, the use of color-coded waste bins for the different types of medical wastes (black, yellow and brown receptacles for collection of general, infectious and hazardous wastes respectively) should be encouraged (Afesi-Dei et al., 2023; Sahiledengle, 2019).

Regarding waste types, a study in Addis Ababa, Ethiopia reported that some hospitals generated mainly non-hazardous wastes (46.89–70.49%) and hazardous wastes (29.5–53.12%), which were largely infectious (6.12-20.48%), pathological (4.73-17.25%), sharps and pharmaceuticals (6.41-11.07% and 3.54-8.73%, respectively) (Debere et al., 2013). In Gauteng Province (South Africa), most health care facilities generated pathological (100%), sharps (100%), cytotoxic (23.5%), pharmaceutical (100%), infectious (91.4%), radioactive (41.2%), general (94.2%) and chemical (64.7%) wastes (Ramodipa et al., 2023) which are similar to the observations in this study. It should be noted that the categories of MCW produced in health facilities/hospitals depends on the location, size of the facility, number of visiting patients, and the specific work activities the setting carries out (Awodele et al., 2016; Cheng et al., 2009; Debere et al., 2013; Letho et al., 2021).

A total of 52 (74.3%) respondents indicated that procedures for handling of medical wastes are clearly indicated (Table 3). However, only 52.9% of these confirmed that medical wastes were being treated using technologies such as autoclaving (37.4%), chemical disinfection (33.3%), incineration (20.0%), microwave disinfection (9.3%) before disposal. The wastes were being primarily disposed by recycling (40.0%) and landfilling (26.7%), although composting (17.3%) and pyrolysis (16.0%). These results confirm that HCWM could be problematic in in Benadir Hospital. A previous study conducted in Tanzanian health care facilities found that in Ilala and Kinondoni, 54% and 10% of the surveyed facilities had waste disposal areas. Some of the MCW were being disposed into open areas, latrines or rubbish pits (Manyele, & Lyasenga, 2010). Another study in in some Ethiopian health facilities reiterated that the most common methods of MCW disposal were open burning in a hole (54%), low-temperature incineration (52%) and open-air burning on the ground (18%) (Habtetsion et al., 2009). A study conducted in Sidama zone of Ethiopia indicated that 42.5% of the health care facilities employed incinerators for disposing used needles and other sharps while the rest preferred open burning and other methods to dispose used needles and other sharps (Yoseph, 2004). A study from Nigerian indicated that some of the healthcare facilities were attempting to treat infectious wastes prior to disposal using either barakina or alcohol (Muluken et al., 2013). Although treatment technologies and disposal methods may differ for each type of HCW, segregation at source into different categories reduces the management, operation and treatment costs along with the risk of infection with these contaminants (Ananth et al., 2010).

Independent predictors for healthcare waste management among health workers in Benadir Hospital.

Our results were comparable to Wafula et al. (2019) who found that unlike health workers with higher secondary education in some hospitals in Kampala (Uganda), health workers with a diploma were 1.49 times more likely to have satisfactory medical wastes management practices. In some hospitals in Bangladesh, males who are 30 years and above were reported to be more likely to have inadequate knowledge of medical wastes compared to females of younger age (Sarker et al., 2014).

CONCLUSIONS

Overall, 67.1% of the respondents were aware that the hospital had HCWM policies and procedures Approximately 22.9% of the respondents who admitted their lack of practice of source segregation of medical wastes in this study suggests that there is lack of unison in the practice of waste segregation among the health care workers in Benadir Hospital.

RECOMMENDATION.

To enhance segregation of wastes at the source and prevent careless handling of injurious wastes, the use of color-coded waste bins for the different types of medical wastes (black, yellow and brown receptacles for collection of general, infectious and hazardous wastes respectively) should be encouraged

It should be noted that the availability of clear national and healthcare facility policies that are up-to-date, comprehensive and known to every health worker is vital for effective HCWM. There is need to create awareness among healthcare workers on proper management of the medical wastes.

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LIST OF ABBREVIATIONS AND ACRONYMS

AIDS Acquired Immunodeficiency Syndrome
HCW Healthcare Wastes
HCWH Health Care Without Harm
HCWM Health Care Waste Management
HIV Human Immunodeficiency Virus
IPC Infection prevention Control
WHO World Health Organization

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Conflict of interest

The authors had no competing interests to declare.

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